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Shakil Mosharrof

Portfolio
Stackoverflow
GitHub
TryHackMe
LinkedIn
AskUbuntu

SKILLS

Language	Python, C, C++, Git, LaTeX, C#, Bash, PHP, JavaScript
Frontend	HTML5, CSS, JS, Bootstrap
Backend	Flask, Django
Database	MySQL, Firebase
IOT & Robotics	Arduino, Raspberry PI, Jetson Nano & Xavier, LIDAR, ZED-Stereo Cam, ESP-32,PX4 (Pixhawk),ROS,ROS2,MAVROS
App Development	Flutter, Dart
Soft Skills	English (business), Bengali (business), Public Speaking, Extempore Speech, Good time management & communication
Pentesting Tools and OS	Burp Suite, NMap, Metasploit, SQLMap, Wireshark, Nessus, John The Ripper, Hashcat, Dirb, Volatility, Parrot OS
Other	Linux, PyTorch, TensorFlow, Git, Docker, Microsoft Excel, Microsoft Word, Microsoft PowerPoint

EXPERIENCE ↗

Industrial Trainee   **Jan 2023 - Feb 2023**
Brainstation 23   *Mirpur DOHS*

- Got hands on training on C# and ASP.NET MVC through Brainstation 23's LMS. During the course, I completed one desktop application project and two web-based projects using ASP.NET .

Capture The Flag (CTF)
TryHackMe
Mentor (Later Vice-President), MIST Cyber Security Club
Achievements:

- Certified for "Junior Penetration Tester" [link]
- Certified for "Attacking Active Windows Directory". [link].
- Became top 4 % on TryHackMe globally . [link]
- Mentor at MIST Cyber Security Club
- CTF Team Lead for Leetcon CTF 2023, became 24th among 300+ teams nationally.
- Achieved 79th place globally among 572 contestants from 30 different countries in Kaspersky codebreakers CTF.
- Became qualified for BlackHatMEA 2023 CTF Finals (Global rank 97 at finals).[link]

Stackoverflow
Provided 4 solutions

- Solution links : 1   2   3   4

Competitive programming   **2020 - 2022**
- Solved over 250+ problems on GeeksForGeeks, Codeforces and Leetcode

PROJECTS

Software & Autonomous System Developer   **2021 - ongoing**
Mars Society's University Rover Challenge (URC)   *USA*
Anatolian Rover Challenge (ARC)   *UKET,Turkey*
Achievements:

- Developed an autonomous rover system using software & communication team for URC-2021 competition which became **champion globally beating 88 teams** in SAR and finally 36 teams in the final Link.
- Developed an autonomous rover system with software & communication team for ARC-2022 competition which **became third among 14 final contestant countries** .Link
- Software & Autonomous Team Lead For URC-2023, became 2nd in Asia in SAR stage.
- Software & Autonomous Team Lead For ARC-2023, became 2nd in Asia & 5th globally.

Pretrained CNN based Dog Classifier
Code

- Project completed during AWS AI/ML Scholarship Programme. Has implementation of ResNET, VGG16 model.

Bus Counter Management System Using JavaFX
Code

- This Project uses the SWING framework and JavaFx implementation in it.

MILITARY COMMUNICATION EQUIPMENT REPAIR AND ISSUING OF SPARE PARTS MANAGEMENT SYSTEM
Code

- This web development project has usage of HTML, CSS, JS, PHP and OracleDB as database.

Simple weight machine using HX711 and Arduino
Code

- Developed a weight machine using HX711 sensor and Arduino which could measure up to 95% accuracy

SoccerBot
- This project was developed for a soccer bot competition and uses Arduino & ESP32 implementation.

DekhboKinbo
Code

- A DVD / Movie /Tv show purchase website built using ASP.NET Core MVC And Entity framework

Alumni Information Management System
Code

- Alumni Information Management Software built using C# & Microsoft Access Database

Blockchain-based Land Record management system with biometric authentication
Code for contract deployment
Code for frontend and database

- A blockchain-based decentralized land record administration system with a biometric authentication system.

RESEARCH & PUBLICATIONS↗

- DeepTriNet: A Tri-Level Attention Based DeepLabv3+ Architecture for Semantic Segmentation of Satellite Images. ArXiv. /abs/2310.06848 [Accepted & published,got the best paper award]
- Performance Analysis of Various EfficientNet Based U-Net++ Architecture for Automatic Building Extraction from High Resolution Satellite Images.ArXiv. /abs/2310.06847
- CycleGAN-Based Data Augmentation with CNN and Vision Transformers (ViT) Models for Improved Maize Leaf Disease Classification. doi: 10.1109/ITMS59786.2023.10317666.
- Biomolecular Analysis of Soil Samples and Rock Imagery for Tracing Evidence of Life Using a Mobile Robot [Accepted at ICRAIE - 2023]
- Enhancing Mango Leaf Disease Classification: ViT, BiT, and CNN-Based Models Evaluated on CycleGAN-Augmented Data [Accepted at ICCIT-2023]
- SecureLandChain: A Blockchain-Based Land Registry System with Biometric Authentication and Certificate Verification System [Submitted for a Q1]
- Automatic Literature Review Generation : An Improved LLM-RAG Based Solution Embedded With Regex and T5. [Thesis]

EDUCATION

Bachelor of Computer Science and Engineering   **2020 - 2024**
Military Institute of Science and Technology

Higher Secondary School Certificate   **2017 - 2019**
Barishal Cadet College